



81408-4400 sequence listing.txt
SEQUENCE LISTING

<110> Yayon, Avner
Rom, Eran
Thomassen-Wolf, Elisabeth
Borges, Eric

<120> ANTIBODIES THAT BLOCK RECEPTOR PROTEIN TYROSINE KINASE ACTIVATION,
METHODS OF SCREENING AND USES THEREOF

<130> 81408-4400

<140> US 10/734,661
<141> 2003-12-15

<150> US 60/299,187
<151> 2001-06-20

<150> PCT/IL02/00494
<151> 2002-06-20

<160> 106

<170> PatentIn version 3.2

<210> 1
<211> 806
<212> PRT
<213> Homo sapiens

<300>
<308> np_000133
<309> 2001-02-21
<313> (1)..(806)

<400> 1

Met Gly Ala Pro Ala Cys Ala Leu Ala Leu Cys Val Ala Val Ala Ile
1 5 10 15

Val Ala Gly Ala Ser Ser Glu Ser Leu Gly Thr Glu Gln Arg Val Val
20 25 30

Gly Arg Ala Ala Glu Val Pro Gly Pro Glu Pro Gly Gln Gln Glu Gln
35 40 45

Leu Val Phe Gly Ser Gly Asp Ala Val Glu Leu Ser Cys Pro Pro Pro
50 55 60

Gly Gly Gly Pro Met Gly Pro Thr Val Trp Val Lys Asp Gly Thr Gly
65 70 75 80

Leu Val Pro Ser Glu Arg Val Leu Val Gly Pro Gln Arg Leu Gln Val
85 90 95

Leu Asn Ala Ser His Glu Asp Ser Gly Ala Tyr Ser Cys Arg Gln Arg
100 105 110

81408-4400 sequence listing.txt

Leu Thr Gln Arg Val Leu Cys His Phe Ser Val Arg Val Thr Asp Ala
115 120 125

Pro Ser Ser Gly Asp Asp Glu Asp Gly Glu Asp Glu Ala Glu Asp Thr
130 135 140

Gly Val Asp Thr Gly Ala Pro Tyr Trp Thr Arg Pro Glu Arg Met Asp
145 150 155 160

Lys Lys Leu Leu Ala Val Pro Ala Ala Asn Thr Val Arg Phe Arg Cys
165 170 175

Pro Ala Ala Gly Asn Pro Thr Pro Ser Ile Ser Trp Leu Lys Asn Gly
180 185 190

Arg Glu Phe Arg Gly Glu His Arg Ile Gly Gly Ile Lys Leu Arg His
195 200 205

Gln Gln Trp Ser Leu Val Met Glu Ser Val Val Pro Ser Asp Arg Gly
210 215 220

Asn Tyr Thr Cys Val Val Glu Asn Lys Phe Gly Ser Ile Arg Gln Thr
225 230 235 240

Tyr Thr Leu Asp Val Leu Glu Arg Ser Pro His Arg Pro Ile Leu Gln
245 250 255

Ala Gly Leu Pro Ala Asn Gln Thr Ala Val Leu Gly Ser Asp Val Glu
260 265 270

Phe His Cys Lys Val Tyr Ser Asp Ala Gln Pro His Ile Gln Trp Leu
275 280 285

Lys His Val Glu Val Asn Gly Ser Lys Val Gly Pro Asp Gly Thr Pro
290 295 300

Tyr Val Thr Val Leu Lys Thr Ala Gly Ala Asn Thr Thr Asp Lys Glu
305 310 315 320

Leu Glu Val Leu Ser Leu His Asn Val Thr Phe Glu Asp Ala Gly Glu
325 330 335

Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Phe Ser His His Ser Ala
340 345 350

Trp Leu Val Val Leu Pro Ala Glu Glu Glu Leu Val Glu Ala Asp Glu

81408-4400 sequence listing.txt

355

360

365

Ala Gly Ser Val Tyr Ala Gly Ile Leu Ser Tyr Gly Val Gly Phe Phe
 370 375 380

Leu Phe Ile Leu Val Val Ala Ala Val Thr Leu Cys Arg Leu Arg Ser
 385 390 395 400

Pro Pro Lys Lys Gly Leu Gly Ser Pro Thr Val His Lys Ile Ser Arg
 405 410 415

Phe Pro Leu Lys Arg Gln Val Ser Leu Glu Ser Asn Ala Ser Met Ser
 420 425 430

Ser Asn Thr Pro Leu Val Arg Ile Ala Arg Leu Ser Ser Gly Glu Gly
 435 440 445

Pro Thr Leu Ala Asn Val Ser Glu Leu Glu Leu Pro Ala Asp Pro Lys
 450 455 460

Trp Glu Leu Ser Arg Ala Arg Leu Thr Leu Gly Lys Pro Leu Gly Glu
 465 470 475 480

Gly Cys Phe Gly Gln Val Val Met Ala Glu Ala Ile Gly Ile Asp Lys
 485 490 495

Asp Arg Ala Ala Lys Pro Val Thr Val Ala Val Lys Met Leu Lys Asp
 500 505 510

Asp Ala Thr Asp Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met
 515 520 525

Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala
 530 535 540

Cys Thr Gln Gly Gly Pro Leu Tyr Val Leu Val Glu Tyr Ala Ala Lys
 545 550 555 560

Gly Asn Leu Arg Glu Phe Leu Arg Ala Arg Arg Pro Pro Gly Leu Asp
 565 570 575

Tyr Ser Phe Asp Thr Cys Lys Pro Pro Glu Glu Gln Leu Thr Phe Lys
 580 585 590

Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu
 595 600 605

81408-4400 sequence listing.txt

Ala Ser Gln Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu
610 615 620

Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg
625 630 635 640

Asp Val His Asn Leu Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu
645 650 655

Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr
660 665 670

His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe
675 680 685

Thr Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe
690 695 700

Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr
705 710 715 720

His Asp Leu Tyr Met Ile Met Arg Glu Cys Trp His Ala Ala Pro Ser
725 730 735

Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Val Leu
740 745 750

Thr Val Thr Ser Thr Asp Glu Tyr Leu Asp Leu Ser Ala Pro Phe Glu
755 760 765

Gln Tyr Ser Pro Gly Gly Gln Asp Thr Pro Ser Ser Ser Ser Gly
770 775 780

Asp Asp Ser Val Phe Ala His Asp Leu Leu Pro Pro Ala Pro Pro Ser
785 790 795 800

Ser Gly Gly Ser Arg Thr
805

<210> 2
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> artificial primer

<400> 2
acgtgctagc tgagtccttg gggacggagc ag

81408-4400 sequence listing.txt

<210> 3
<211> 55
<212> DNA
<213> Artificial sequence

<220>
<223> artificial primer

<400> 3
acgtctcgag ttaatggtga tggatgatggt gtgcatacac acagcccgcc tcgtc 55

<210> 4
<211> 1147
<212> DNA
<213> Homo sapiens

<300>
<308> m58051
<309> 1994-11-08
<313> (1)..(1147)

<400> 4
gcgcgctgcc tgaggacgcc gcggcccccgc ccccgccat gggcgcccct gcctgcgccc 60
tcgcgctctg cgtggccgtg gccatcgtgg ccggcgccctc ctgggagtc ttggggacgg 120
agcagcgctg cgtggggcga gcggcagaag tccccggccc agagcccggc cagcaggagc 180
agttggtctt cggcagcggg gatgctgtgg agctgagctg tccccgccc gggggtggtc 240
ccatggggcc cactgtctgg gtcaaggatg gcacagggtt ggtgccctcg gagcgtgtcc 300
tggtggggcc ccagcggtg caggtgtga atgcctcca cgaggactcc ggggcctaca 360
gctgccggca gcggctcacg cagcgcgtac tgtgccactt cagtgtgcgg gtgacagacg 420
ctccatcctc gggagatgac gaagacgggg aggacgaggc tgaggacaca ggtgtggaca 480
caggggcccc ttactggaca cggcccgagc ggatggacaa gaagctgctg gccgtgccgg 540
ccgccaacac cgtccgcttc cgctgcccag ccgctggcaa cccactccc tccatctcct 600
ggctgaagaa cggcagggag ttccgcggcg agcaccgcat tggaggcatc aagctgcggc 660
atcagcagtg gagcctggtc atggaaagcg tggatgccctc ggaccgcggc aactacacct 720
gcgtcgtgga gaacaagttt ggcagcatcc ggcagacgta cacgctggac gtgctggagc 780
gtccccgca ccggcccatc ctgcaggcgg ggctgccggc caaccagacg gcggtgctgg 840
gcagcgacgt ggagttccac tgcaagggtg acagtgcgc acagccccac atccagtggc 900
tcaagcacgt ggaggtgaac ggcagcaagg tgggcccggc cggcacaccc tacgttaccg 960
tgctcaagac ggcggggcgt aacaccaccg acaaggagct agagggttctc tccttgaca 1020
acgtcacctt tgaggacgcc ggggagtaca cctgcctggc gggcaattct attgggtttt 1080
ctcatcactc tgcgtggctg gtggtgctgc cagccgagga ggagctggtg gaggctgacg 1140
aggcggg 1147

81408-4400 sequence listing.txt

<210> 5
 <211> 5695
 <212> DNA
 <213> EXPRESSION VECTOR pCEP-PU/AC7

<400> 5
 gacggatcgg gagatctccc gatccccctat ggtcgactct cagtacaatc tgctctgatg 60
 ccgcatagtt aagccagtat ctgctccctg cttgtgtgtt ggaggctcgt gagtagtgcg 120
 cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc 180
 ttagggttag gcgtttttgcg ctgcttcgag atgtacgggc cagatatacg cgttgacatt 240
 gattattgac tagttattaa tagtaatcaa ttacgggggtc attagttcat agcccatata 300
 tggagttccg cgttacataa cttacggtaa atggcccggc tggctgaccg cccaacgacc 360
 cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggacttttc 420
 attgacgtca atgggtggac tatttacggt aaactgccc a ttggcagta catcaagtgt 480
 atcatatgcc aagtagcccc cctattgacg tcaatgacgg taaatggccc gcctggcatt 540
 atgcccagta catgacctta tgggactttc ctacttgcca gtacatctac gtattagtca 600
 tcgctattac catggtgatg cggttttggc agtacatcaa tgggcgtgga tagcggtttg 660
 actcacgggg atttccaagt ctccacccca ttgacgtcaa tgggagtttg ttttggcacc 720
 aaaatcaacg ggactttcca aaatgtcgt acaactccgc ccattgacg caaatgggag 780
 gtaggcgtgt acggtgggag gtctatataa gcagagctct ctggctaact agagaaccca 840
 ctgcttactg gcttatcgaa attaatcga ctactatag ggagacccaa gctggctagc 900
 gtttaaaact aagcttggt a cagagctcgg atccccgtc tgcattctat gaaggtcgtg 960
 gagatcccga ggagcccaaa tcttgtgaca aaactcacac atgcccaccg tgcccagcac 1020
 ctgaactcct ggggggaccg tcagtcttcc tcttcccccc aaaacccaag gacaccctca 1080
 tgatctcccc gaccctgag gtcacatgcg tgggtggtgga cgtgagccac gaagaccctg 1140
 aggtcaagtt caactggtac gtggacggcg tggaggtgca taatgccaag acaaagccgc 1200
 gggaggagca gtacaacagc acgtaccggg tggtcagcgt cctcaccgtc ctgcaccagg 1260
 actggctgaa tggcaaggag tacaagtga aggtctccaa caaagccctc ccagcccca 1320
 tcgagaaaac catctccaaa gccaaagggc agccccgaga accacagggtg tacaccctgc 1380
 ccccatcccg ggatgagctg accaagaacc aggtcagcct gacctgcctg gtcaaaggct 1440
 tctatcccag cgacatcgcc gtggagtggg agagcaatgg gcagccggag aacaactaca 1500
 agaccacgcc tcccgtgctg gactccgacg gctccttctt cctctacagc aagctcaccg 1560
 tggacaagag caggtggcag caggggaacg tcttctcatg ctccgtgatg catgaggctc 1620
 tgcacaacca ctacacgcag aagagcctct ccctgtctcc gggtaaatga tctagagggc 1680

81408-4400 sequence listing.txt

ccgtttaaac ccgctgatca gcctcgactg tgccttctag ttgccagcca tctgttggtt	1740
gccccctccc cgtgccttcc ttgaccctgg aagggtgccac tcccactgtc ctttccta	1800
aaaatgagga aattgcatcg cattgtctga gtaggtgtca ttctattctg gggggtggg	1860
tggggcagga cagcaagggg gaggattggg aagacaatag caggcatgct ggggatgcg	1920
tgggctctat ggcttctgag gcggaaagaa ccagctgggg ctctaggggg tatccccacg	1980
cgccctgtag cggcgcatta agcgcggcgg gtgtgggtgt tacgcgcagc gtgaccgcta	2040
cacttgccag cgccctagcg cccgctcctt tcgctttctt cccttcctt ctcgccacgt	2100
tcgccggctt tccccgtcaa gctctaaatc ggggcatccc tttagggttc cgatttagtg	2160
ctttacggca cctcgacccc aaaaaacttg attagggtga tggttcacgt agtgggcat	2220
cgccctgata gacggttttt cgcccttga cgttgagtc cacgttctt aatagtggac	2280
tcttgttcca aactggaaca acactcaacc ctatctcggt ctattctttt gatttataag	2340
ggattttggg gatttcggcc tattggttaa aaaatgagct gatttaacaa aaatttaacg	2400
cgaattaatt ctgtggaatg tgtgtcagtt aggggtgtga aagtccccag gctccccagg	2460
caggcagaag tatgcaaagc atgcatctca attagtcagc aaccagggtg ggaaagtccc	2520
caggctcccc agcaggcaga agtatgcaaa gcatgcatct caattagtca gcaaccatag	2580
tcccgcccc aactccgcc atcccccccc taactccgcc cagttccgcc cattctccgc	2640
cccatggctg actaattttt tttatttatg cagaggccga ggccgcctct gcctctgagc	2700
tattccagaa gtagtgagga ggcttttttg gaggcctagg cttttgcaaa aagctcccgg	2760
gagcttgat atccattttc ggatctgatc agcacgtgtt gacaattaat catcggcata	2820
gtatatcggc atagtataat acgacaaggt gaggaactaa accatggcca agttgaccag	2880
tgccgttccg gtgctcaccg cgcgcgacgt cgccggagcg gtcgagttct ggaccgaccg	2940
gctcgggttc tcccgggact tcgtggagga cgacttcgcc ggtgtggtcc gggacgacgt	3000
gacctgttc atcagcgcgg tccaggacca ggtggtgccg gacaacaccc tggcctgggt	3060
gtgggtgccc ggcctggacg agctgtacgc cgagtggctg gaggtcgtgt ccacgaactt	3120
ccgggacgcc tccgggccgg ccatgaccga gatcggcgag cagccgtggg ggcgggagtt	3180
cgccctgcgc gaccggccg gcaactgcgt gcacttcgtg gccgaggagc aggactgaca	3240
cgtgctacga gatttcgatt ccaccgccgc cttctatgaa aggttgggct tcggaatcgt	3300
tttccgggac gccggctgga tgatcctcca gcgcggggat ctcatgctgg agttcttcgc	3360
ccacccaac ttgtttattg cagcttataa tggttacaaa taaagcaata gcatcacaaa	3420
tttcacaaat aaagcatttt tttactgca ttctagttgt ggtttgtcca aactcatcaa	3480
tgtatcttat catgtctgta taccgtcgac ctctagctag agcttggcgt aatcatggtc	3540

81408-4400 sequence listing.txt

atagctgttt cctgtgtgaa attgttatcc gctcacaatt ccacacaaca tacgagccgg	3600
aagcataaag tgtaaagcct ggggtgccta atgagtgagc taactcacat taattgcgtt	3660
gcgctcactg cccgctttcc agtcgggaaa cctgtcgtgc cagctgcatt aatgaatcgg	3720
ccaacgcgcg gggagaggcg gtttgcgtat tgggcgctct tccgcttcct cgctcactga	3780
ctcgctgcgc tcggtcgttc ggctgcggcg agcggtatca gctcactcaa aggcggtaat	3840
acggttatcc acagaatcag gggataacgc aggaaagaac atgtgagcaa aaggccagca	3900
aaaggccagg aaccgtaaaa aggccgcgtt gctggcgttt ttccataggc tccgcccccc	3960
tgacgagcat cacaaaaatc gacgctcaag tcagaggtag cgaaaccga caggactata	4020
aagataccag gcgtttcccc ctggaagctc cctcgtgcgc tctcctgttc cgaccctgcc	4080
gcttaccgga tacctgtccg cctttctccc ttcgggaagc gtggcgcttt ctcaatgctc	4140
acgctgtagg tatctcagtt cggtgtaggc cgttcgtcc aagctgggct gtgtgcacga	4200
acccccgtt cagcccgacc gctgcgcctt atccggtaac tatcgtcttg agtccaaccc	4260
ggtaagacac gacttatcgc cactggcagc agccactggc aacaggatta gcagagcgag	4320
gtatgtaggc ggtgctacag agttcttgaa gtggtggcct aactacggct aactagaag	4380
gacagtattt ggtatctgcg ctctgctgaa gccagttacc ttcggaaaaa gaggtag	4440
ctcttgatcc ggcaaaaaa ccaccgctgg tagcggtagt tttttgttt gcaagcagca	4500
gattacgcgc agaaaaaaag gatctcaaga agatcctttg atcttttcta cggggtctga	4560
cgctcagtgg aacgaaaact cacgttaagg gattttggtc atgagattat caaaaaggat	4620
cttcacctag atccttttaa attaaaaatg aagttttaaa tcaatctaaa gtatatatga	4680
gtaaaacttg tctgacagtt accaatgctt aatcagttag gcacctatct cagcgatctg	4740
tctatttcgt tcatccatag ttgcctgact ccccgctcgt tagataacta cgatacggga	4800
gggcttacca tctggcccca gtgctgcaat gataccgcga gaccacgct caccggctcc	4860
agatttatca gcaataaacc agccagccgg aagggccgag cgcagaagtg gtcctgcaac	4920
tttatccgcc tccatccagt ctattaattg ttgccgggaa gctagagtaa gtagttcgcc	4980
agttaatagt ttgcgcaacg ttgttgccat tgctacaggc atcgtgggtg cacgctcgtc	5040
gtttggtatg gcttcattca gctccggttc ccaacgatca aggcgagtta catgatcccc	5100
catgtttgtc aaaaaagcgg ttagctcctt cggtcctccg atcgttgtca gaagtaagtt	5160
ggccgcagtg ttatcactca tggttatggc agcactgcat aattctctta ctgtcatgcc	5220
atccgtaaga tgcttttctg tgactggtga gtactcaacc aagtcattct gagaatagt	5280
tatgcggcga ccgagttgct cttgcccggc gtcaatacgg gataataccg cgccacatag	5340
cagaacttta aaagtgtcga tcattggaaa acgttcttcg gggcgaaaac tctcaaggat	5400
cttaccgctg ttgagatcca gttcgatgta accactcgt gcaccaact gatcttcagc	5460

81408-4400 sequence listing.txt

atcttttact ttcaccagcg tttctgggtg agcaaaaaca ggaaggcaaa atgccgcaaa 5520
aaaggggaata agggcgacac ggaaatgttg aatactcata ctcttccttt ttcaatatta 5580
ttgaagcatt tatcaggggtt attgtctcat gagcggatac atatttgaat gtatttagaa 5640
aaataaaca ataggggttc cgcgcacatt tccccgaaaa gtgccacctg acgtc 5695

<210> 6
<211> 235
<212> PRT
<213> SYNTHETIC

<220>
<221> misc_feature
<223> Fc domain of Immunoglobulin

<400> 6

Asp Pro Glu Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro
1 5 10 15

Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro
20 25 30

Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr
35 40 45

Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn
50 55 60

Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg
65 70 75 80

Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val
85 90 95

Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser
100 105 110

Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys
115 120 125

Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp
130 135 140

Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe
145 150 155 160

Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu
Page 9

81408-4400 sequence listing.txt

165

170

175

Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe
 180 185 190

Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly
 195 200 205

Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr
 210 215 220

Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 225 230 235

<210> 7
 <211> 1078
 <212> DNA
 <213> Homo sapiens

<220>
 <221> mutation
 <222> (1046)..(1048)
 <223> BASE PAIRS ENCODING THANATOPHORIC DYSPLASIA (TD) SUBSTITUTION IN
 FGFR3

<400> 7
 tgagtccttg gggacggagc agcgcgtcgt ggggcgagcg gcagaagtcc cgggccccaga 60
 gcccgccag caggagcagt tggcttcgag cagcggggat gctgtggagc tgagctgtcc 120
 cccgcccggg ggtggtccca tggggccac tgtctgggtc aaggatggca cagggctggt 180
 gccctcggag cgtgtccttg tggggccca gcggctgcag gtgctgaatg cctccacga 240
 ggactccggg gcctacagct gccggcagcg gctcacgcag cgcgtactgt gccacttcag 300
 tgtgcgggtg acagacgctc catcctcggg agatgacgaa gacggggagg acgaggctga 360
 ggacacaggt gtggacacag gggccctta ctggacacgg ccgagcgga tggacaagaa 420
 gctgctggcc gtgccggccg ccaacaccgt ccgcttccgc tgcccagccg ctggcaaccc 480
 cactccctcc atctcctggc tgaagaacgg caggagattc cgcggcgagc accgcattgg 540
 aggcacaaag ctgcggcatc agcagtggag cctgggtcatg gaaagcgtgg tgccctcgga 600
 ccgcggaac tacacctgcg tcgtggagaa caagtttggc agcatccggc agacgtacac 660
 gctggacgtg ctggagcgct ccccgaccg gccatcctg caggcggggc tgccggccaa 720
 ccagacggcg gtgctgggca gcgacgtgga gttccactgc aagggtgtaca gtgacgcaca 780
 gcccacatc cagtggctca agcacgtgga ggtgaacggc agcaagggtg gcccgacgg 840
 cacaccctac gttaccgtgc tcaagacggc gggcgctaac accaccgaca aggagctaga 900
 ggttctctcc ttgcacaacg tcacctttga ggacgccggg gactacacct gcctggcggg 960

81408-4400 sequence listing.txt

caattctatt gggttttctc atcactctgc gtggctggtg gtgctgccag ccgaggagga 1020

gctggtggag gctgacgagg cgggctgtgt gtatgcacac catcaccatc accattaa 1078

<210> 8

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 8

Asp Phe Leu Gly Tyr Glu Phe Asp Tyr
1 5

<210> 9

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 9

Gln Ser Tyr Asp Tyr Ser Ala Asp Tyr
1 5

<210> 10

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 10

Tyr Tyr Gly Ser Ser Leu Tyr His Tyr Val Phe Gly Gly Phe Ile Asp
1 5 10 15

Tyr

<210> 11

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 11

Gln Ser His His Phe Tyr Glu

1

5

<210> 12
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 12

Tyr His Ser Trp Tyr Glu Met Gly Tyr Tyr Gly Ser Thr Val Gly Tyr
 1 5 10 15

Met Phe Asp Tyr
 20

<210> 13
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 13

Gln Ser Tyr Asp Phe Asp Phe Ala
 1 5

<210> 14
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 14

Asp Asn Trp Phe Lys Pro Phe Ser Asp Val
 1 5 10

<210> 15
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

<400> 15

Gln Gln Tyr Asp Ser Ile Pro Tyr
 1 5

81408-4400 sequence listing.txt

<210> 16
 <211> 10
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> CDR domain from phage library

 <400> 16
 Val Asn His Trp Thr Tyr Thr Phe Asp Tyr
 1 5 10

<210> 17
 <211> 8
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> CDR domain from phage library

 <400> 17

Gln Gln Met Ser Asn Tyr Pro Asp
 1 5

<210> 18
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

 <400> 18

Gly Tyr Trp Tyr Ala Tyr Phe Thr Tyr Ile Asn Tyr Gly Tyr Phe Asp
 1 5 10 15

Asn

<210> 19
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR domain from phage library

 <400> 19

Gln Ser Tyr Asp Asn Asn Ser Asp Val
 1 5

<210> 20
 <211> 18
 <212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 20

Thr Trp Gln Tyr Ser Tyr Phe Tyr Tyr Leu Asp Gly Gly Tyr Tyr Phe
1 5 10 15

Asp Ile

<210> 21

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 21

Gln Gln Thr Asn Asn Ala Pro Val
1 5

<210> 22

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 22

Asn Met Ala Tyr Thr Asn Tyr Gln Tyr Val Asn Met Pro His Phe Asp
1 5 10 15

Tyr

<210> 23

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 23

Gln Ser Tyr Asp Tyr Phe Lys Leu
1 5

<210> 24

<211> 8

81408-4400 sequence listing.txt

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 24

Ser Tyr Tyr Pro Asp Phe Asp Tyr

1

5

<210> 25

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 25

Gln Ser Tyr Asp Gly Pro Asp Leu Trp

1

5

<210> 26

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 26

Gly Gly Gly Trp Val Ser His Gly Tyr Tyr Tyr Leu Phe Asp Leu

1

5

10

15

<210> 27

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 27

Phe Gln Tyr Gly Ser Ile Pro Pro

1

5

<210> 28

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> CDR domain from phage library

<400> 28

81408-4400 sequence listing.txt

Ser Met Asn Ser Thr Met Tyr Trp Tyr Leu Arg Arg Val Leu Phe Asp
1 5 10 15

His

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR domain from phage library

<400> 29

Gln Ser Tyr Asp Met Tyr Met Tyr Ile
1 5

<210> 30
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 30
gattttcttg gttatgagtt tgattat 27

<210> 31
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 31
cagagctatg actattctgc tgattat 27

<210> 32
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 32
tattatgggt cttctcttta tcattatggt tttggtgggt ttattgatta t 51

<210> 33
<211> 21
<212> DNA
<213> Artificial Sequence

81408-4400 sequence listing.txt

```

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 33
cagtctcatc atttttatga g                                21

<210> 34
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 34
tatcattcctt ggtatgagat gggttattat ggttctactg ttggttatat gtttgattat    60

<210> 35
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 35
cagagctatg actttgattt tgct                                24

<210> 36
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 36
gataattggt ttaagccttt ttctgatggt                            30

<210> 37
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

<400> 37
cagcagtatg attctattcc ttat                                24

<210> 38
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of CDR domain from phage library

```

81408-4400 sequence listing.txt

<400> 38		
gttaatcatt ggacttatac ttttgattat		30
<210> 39		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 39		
cagcagatgt ctaattatcc tgat		24
<210> 40		
<211> 51		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 40		
ggttattggg atgcttattt tacttatatt aattatgggt attttgataa t		51
<210> 41		
<211> 27		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 41		
cagagctatg acaataattc tgatggt		27
<210> 42		
<211> 45		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 42		
ggtggtgggt gggtttctca tggttattat tatctttttg atctt		45
<210> 43		
<211> 24		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> polynucleotide sequence of CDR domain from phage library		
<400> 43		
tttcagtatg gttctattcc tcct		24

81408-4400 sequence listing.txt

<210> 44
 <211> 54
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 44
 acttggcagt attcttattt ttattatctt gatgggtggtt attattttga tatt 54

 <210> 45
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 45
 cagcagacta ataatgctcc tggt 24

 <210> 46
 <211> 51
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 46
 aatatggctt atactaatta tcagtatggt aatatgcctc attttgatta t 51

 <210> 47
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 47
 cagagctatg actatttttaa gctt 24

 <210> 48
 <211> 51
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 48
 tctatgaatt ctactatgta ttggtatctt cgtcgtgttc tttttgatca t 51

 <210> 49

81408-4400 sequence listing.txt

<211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 49
 cagagctatg acatgtataa ttatatt 27

 <210> 50
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 50
 tcttattatc ctgattttga ttat 24

 <210> 51
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of CDR domain from phage library

 <400> 51
 cagagctatg acggtcctga tctttgg 27

 <210> 52
 <211> 5020
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> polynucleotide sequence of cloning vector

 <300>
 <301> Knappik et al
 <302> Fully synthetic human combinatorial antibody libraries (HuCAL)
 based on modular consensus frameworks and CDRs randomized with
 trinucleotides.
 <303> J Mol Biol
 <304> 296
 <305> 1
 <306> 57-86
 <307> 2000-02-11
 <308> pubmed/10656818
 <309> 2000-02-11
 <313> (1)..(5020)

 <400> 52
 atcgtgctga cccagccgcc ttcagtgagt ggcgcaccag gtcagcgtgt gaccatctcg 60
 tgtagcggca gcagcagcaa cattggcagc aactatgtga gctggtacca gcagttgccc 120
 gggacggcgc cgaaactgct gatttatgat aacaaccagc gtccctcagg cgtgccggat 180

81408-4400 sequence listing.txt

cgtttttagcg gatccaaaag cggcaccagc gcgagccttg cgattacggg cctgcaaagc	240
gaagacgaag cggattatta ttgccagagc tatgacatgc ctcaggctgt gtttggcggc	300
ggcacgaagt ttaaccgttc ttggccagcc gaaagccgca ccgagtgtga cgctgtttcc	360
gccgagcagc gaagaattgc aggcgaacaa agcgaccctg gtgtgcctga ttagcgactt	420
ttatccggga gccgtgacag tggcctggaa ggcagatagc agccccgtca aggcgggagt	480
ggagaccacc acaccctcca aacaaagcaa caacaagtac gcggccagca gctatctgag	540
cctgacgcct gagcagtgga agtcccacag aagctacagc tgccagggtca cgcattgagg	600
gagcaccgtg gaaaaaaccg ttgcccgcac tgaggcctga taagcatgcg taggagaaaa	660
taaaatgaaa caaagcacta ttgactggc actcttaccg ttgctcttca cccctgttac	720
caaagcccag gtgcaattga aagaaagcgg cccggccctg gtgaaaccga cccaaaccct	780
gaccctgacc tgtacctttt ccggatttag cctgtccacg tctggcgttg gcgtgggctg	840
gattcgccag ccgcctggga aagccctcga gtggctggct ctgattgatt gggatgatga	900
taagtattat agcaccagcc tgaaaacgcg tctgaccatt agcaaagata cttcgaaaaa	960
tcagggtggtg ctgactatga ccaacatgga cccgggtggat acggccacct attattgcgc	1020
gcgttctcct cgttatcgtg gtgcttttga ttattggggc caaggcacc cttgtgacgg	1080
tagctcagcg tcgaccaaag gtccaagcgt gtttccgctg gctccgagca gcaaaagcac	1140
cagcggcggc acggctgccc tgggctgcct gggttaaagat tatttcccgg aaccagtcac	1200
cgtgagctgg aacagcgggg cgctgaccag cggcgtgcat acctttccgg cgggtgctgca	1260
aagcagcggc ctgtatagcc tgagcagcgt tgtgaccgtg ccgagcagca gcttaggcac	1320
tcagacctat atttgcaacg tgaaccataa accgagcaac accaaagtgg ataaaaaagt	1380
ggaaccgaaa agcgaattcg actataaaga tgacgatgac aaaggcgcgc cgtggagcca	1440
cccgagcttt gaaaaatgat aagcttgacc tgtgaagtga aaaatggcgc agattgtgcg	1500
acatTTTTTT tgtctgccgt ttaattaaag gggggggggg gccggcctgg ggggggggtgt	1560
acatgaaatt gtaaactgta atattttgtt aaaattcgcg ttaaattttt gttaaatacag	1620
ctcatTTTTT aaccaatagg ccgaaatcgg caaaatccct tataaatcaa agaataagac	1680
cgagataggg ttgagtgttg ttccagtttg gaacaagagt ccactattaa agaacgtgga	1740
ctccaacgtc aaagggcgaa aaaccgtcta tcagggcgat ggcccactac gagaaccatc	1800
accctaataca agtttttttg ggtcgagggt ccgtaaagca ctaaatacga accctaagag	1860
gagccccga ttttagagctt gacggggaaa gccggcgaac gtggcgagaa aggaagggaa	1920
gaaagcgaag ggagcgggag ctagggcgct ggcaagtgtg gcggtcacgc tgcgcgtaac	1980
caccacaccc gccgcgctta atgcgccgct acagggcgcg tgctagacta gtgtttaaac	2040

81408-4400 sequence listing.txt

cggaaccgggg gggggccttaa gtgggctgca aaacaaaacg gcctcctgtc aggaagccgc	2100
ttttatcggg tagcctcact gcccgcctttc cagtcgggaa acctgtcgtg ccagctgcat	2160
cagtgaatcg gccaacgcgc ggggagaggc ggtttgcgta ttgggagcca ggggtggtttt	2220
tcttttcacc agtgagacgg gcaacagctg attgcccttc accgcctggc cctgagagag	2280
ttgcagcaag cgggtccacgc tggtttgccc cagcaggcga aaatcctggt tgatgggtggt	2340
cagcggcggg atataacatg agctgtcctc ggtatcgtcg tatccacta ccgagatgtc	2400
cgcaccaacg cgcagcccgg actcggtaat ggcacgcatt gcgcccagcg ccatctgac	2460
gttggcaacc agcatcgag tgggaacgat gccctcattc agcatttgca tggtttggtg	2520
aaaaccggac atggcactcc agtcgccttc ccgttccgct atcggctgaa tttgattgcg	2580
agtgagatat ttatgccagc cagccagacg cagacgcgcc gagacagaac ttaatgggcc	2640
agctaacagc gcgatttgct ggtggcccaa tgcgaccaga tgctccacgc ccagtcgcgt	2700
accgtcctca tgggagaaaa taatactggt gatgggtgtc tggtcagaga catcaagaaa	2760
taacgccgga acattagtgc aggcagcttc cacagcaata gcacctggt catccagcgg	2820
atagttaata atcagcccac tgacacgttg cgcgagaaga ttgtgcaccg ccgctttaca	2880
ggcttcgacg ccgcttcggt ctaccatcga cagcaccag ctggcaccca gttgatcggc	2940
gcgagattta atcgcgcgca caatttgca cggcgcgtgc agggccagac tggaggtggc	3000
aacgccaatc agcaacgact gtttgcccgc cagttgttgt gccacgcggt taggaatgta	3060
attcagctcc gccatcgccg cttccacttt tccccgcgtt ttcgcagaaa cgtggctggc	3120
ctggttcacc acgcgggaaa cggcttgata agagacaccg gcatactctg cgacatcgta	3180
taacgttact ggtttcacat tcaccaccct gaattgactc tcttccgggc gctatcatgc	3240
cataccgcga aagggttttgcc gccattcgat gctagccatg tgagcaaaaag gccagcaaaa	3300
ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc cataggctcc gccccctga	3360
cgagcatcac aaaaatcgac gctcaagtca gaggtggcga aaccgcagag gactataaag	3420
ataccaggcg tttccccctg gaagctccct cgtgcgctct cctgttccga ccctgccgct	3480
taccggatac ctgtccgcct ttctcccttc gggaagcgtg gcgctttctc atagctcacg	3540
ctgtaggtat ctcagttcgg tgtaggtcgt tcgctccaag ctgggctgtg tgcacgaacc	3600
ccccgttcag cccgaccgct gcgccttatc cggttaactat cgtcttgagt ccaaccgggt	3660
aagacacgac ttatcgccac tggcagcagc cactggtaac aggattagca gagcgaggta	3720
tgtaggcgggt gctacagagt tcttgaagtg gtggcctaac tacggctaca ctagaagaac	3780
agtatttggt atctgcgctc tgctgtagcc agttaccttc ggaaaaagag ttggtagctc	3840
ttgatccggc aaacaaacca ccgctggtag cgggtggtttt tttgtttgca agcagcagat	3900
tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc tttctacgg ggtctgacgc	3960

81408-4400 sequence listing.txt

```

tcagtggaac gaaaactcac gttaagggat tttggtcaga tctagcacca ggcgtttaag 4020
ggcaccaata actgccttaa aaaaattacg ccccgccctg ccactcatcg cagtactgtt 4080
gtaattcatt aagcattctg ccgacatgga agccatcaca aacggcatga tgaacctgaa 4140
tcgccagcgg catcagcacc ttgtcgctt gcgtataata tttgcccata gtgaaaacgg 4200
gggcgaagaa gttgtccata ttggctacgt ttaaatacaa actggtgaaa ctcacccagg 4260
gattggctga gacgaaaaac atattctcaa taaacccttt agggaaaatag gccagggttt 4320
caccgtaaca cgccacatct tgcgaatata tgtgtagaaa ctgccggaaa tcgtcgtggt 4380
attcactcca gagcgaatga aacgtttcag tttgctcatg gaaaacgggtg taacaagggt 4440
gaacactatc ccatatcacc agctcaccgt ctttcattgc catacggaaac tccgggtgag 4500
cattcatcag gcgggcaaga atgtgaataa aggccggata aaacttgtgc ttatttttct 4560
ttacggctct taaaaaggcc gtaatatcca gctgaacgggt ctggttatag gtacattgag 4620
caactgactg aaatgcctca aaatgttctt tacgatgcc a ttgggatata tcaacgggtg 4680
tatatccagt gatTTTTTTC tccatttttag cttccttagc tcctgaaaat ctcgataact 4740
caaaaaatac gcccggtagt gatcttattt cattatgggtg aaagttggaa cctcacccga 4800
cgtctaattg gagttagctc actcattagg caccgccaggc ttacacttt atgcttccgg 4860
ctcgtatgtt gtgtggaatt gtgagcggat aacaatttca cacaggaaac agctatgacc 4920
atgattacga atttctagat aacgagggca aaaaatgaaa aagacagcta tcgcgattgc 4980
agtggcactg gctggtttctg ctaccgtagc gcaggccgat 5020

```

```

<210> 53
<211> 4151
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> polynucleotide sequence of cloning vector

```

```

<300>
<301> knappik et al
<302> Fully synthetic human combinatorial antibody libraries (HuCAL)
based on modular consensus frameworks and CDRs randomized with
trinucleotides.
<303> j mol biol
<304> 296
<305> 1
<306> 57-86
<307> 2000-02-11
<308> pubmed/10656818
<309> 2000-02-11
<313> (1)..(4151)

```

```

<400> 53
tctagataac gagggcaaaa aatgaaaaag acagctatcg cgattgcagt ggcactggct 60

```

81408-4400 sequence listing.txt

ggtttcgcta	ccgtagcgca	ggccgatata	gtgctgaccc	agagcccggc	gaccctgagc	120
ctgtctccgg	gcgaacgtgc	gaccctgagc	tgcagagcga	gccagagcgt	gagcagcagc	180
tatctggcgt	ggtaccagca	gaaaccaggt	caagcaccgc	gtctattaat	ttatggcgcg	240
agcagccgtg	caactggggg	cccggcgcg	tttagcggct	ctggatccgg	cacggatttt	300
accctgacca	ttagcagcct	ggaacctgaa	gactttgcgg	tgtattattg	ccagcagcat	360
tataaccacc	cgccgacctt	tggccagggt	acgaaagttg	aaattaaacg	tacgggtggct	420
gctccgagcg	tgtttatttt	tccgccgagc	gatgaacaac	tgaaaagcgg	cacggcgagc	480
gtggtgtgcc	tgctgaacaa	cttttatccg	cgtgaagcga	aagttcagtg	gaaagtagac	540
aacgcgctgc	aaagcggcaa	cagccaggaa	agcgtgaccg	aacaggatag	caaagatagc	600
acctattctc	tgagcagcac	cctgaccctg	agcaaagcgg	attatgaaaa	acataaagtg	660
tatgcgtgcg	aagtgaccga	tcaagggtct	agcagcccgg	tgactaaatc	ttttaatcgt	720
ggcgaggcct	gataagcatg	cgtaggagaa	aataaaatga	aacaaagcac	tattgcactg	780
gcactcttac	cgttgctctt	caccctgttt	accaaagccg	aagtgcaatt	ggtggaaagc	840
ggcggcgggc	tgggtgcaacc	gggcggcagc	ctgcgtctga	gctgcgcggc	ctccggattt	900
acctttagca	gctatgcatg	gagctgggtg	cgccaagccc	ctgggaaggg	tctcgagtgg	960
gtgagcgcg	ttagcggtag	cggcggcagc	acctattatg	cggatagcgt	gaaaggccgt	1020
tttaccattt	cacgtgataa	ttcgaaaaac	accctgtatc	tgcaaataaa	cagcctgcgt	1080
gcggaagata	cggccgtgta	ttattgcgcg	cggtggggcg	gcgatggctt	ttatgcatg	1140
gattattggg	gccaaggcac	cctggtgacg	gtagctcag	cgtcgaccaa	aggtccaagc	1200
gtgtttccgc	tggctccgag	cagcaaaagc	accagcggcg	gcacggctgc	cctgggctgc	1260
ctgggttaaag	attattttcc	ggaaccagtc	accgtgagct	ggaacagcgg	ggcgctgacc	1320
agcggcgctg	atacctttcc	ggcgggtgct	caaagcagcg	gcctgtatag	cctgagcagc	1380
gttgtgaccg	tgccgagcag	cagcttaggc	actcagacct	atatttgcaa	cgtgaaccat	1440
aaaccgagca	acaccaaagt	ggataaaaaa	gtggaaccga	aaagcgaatt	cgggggaggg	1500
agcgggagcg	gtgattttga	ttatgaaaag	atggcaaacg	ctaataaggg	ggctatgacc	1560
gaaaatgccg	atgaaaacgc	gctacagtct	gacgctaaag	gcaaacttga	ttctgtcgct	1620
actgattacg	gtgctgctat	cgatgggttt	attggtgacg	ttccggcct	tgctaattgg	1680
aatgggtgcta	ctgggtgattt	tgctggctct	aattcccaaa	tggctcaagt	cgggtgacgg	1740
gataattcac	ctttaatgaa	taattttccg	caatattttac	cttccctccc	tcaatcgggt	1800
gaatgtcgcc	cttttgtctt	tggcgctggg	aaaccatatg	aattttctat	tgattgtgac	1860
aaaataaact	tattccgtgg	tgtctttgcg	tttcttttat	atgttgccac	ctttatgtat	1920
gtatttttcta	cgtttgctaa	catactgcgt	aataaggagt	cttgataagc	ttgacctgtg	1980

81408-4400 sequence listing.txt

aagtgaaaaa tggcgagat tgtgcgacat tttttttgtc tgccgtttta tgaaattgta	2040
aacgttaata ttttgttaaa attcgcgtta aatttttgtt aaatcagctc attttttaac	2100
caataggccg aaatcgga aatcccttat aaatcaaaag aatagaccga gatagggttg	2160
agtgttggtc cagtttgga caagagtcca ctattaaaga acgtggactc caacgtcaaa	2220
gggcgaaaaa ccgtctatca gggcgatggc ccactacgag aaccatcacc ctaatcaagt	2280
tttttggggt cgagggtgccg taaagcacta aatcggaacc ctaaaggag ccccgattt	2340
agagcttgac ggggaaagcc ggcgaacgtg gcgagaaagg aagggaagaa agcgaaagga	2400
gcgggcgcta gggcgctggc aagtgtagcg gtcacgctgc gcgtaaccac cacaccgcc	2460
gcgcttaatg cgccgctaca gggcgcgctgc tagccatgtg agcaaaaggc cagcaaaagg	2520
ccaggaaccg taaaaaggcc gcgttgctgg cgtttttcca taggctccgc cccctgacg	2580
agcatcacia aaatcgacgc tcaagtcaga ggtggcgaaa cccgacagga ctataaagat	2640
accaggcgtt tccccctgga agctccctcg tgcgctctcc tgttccgacc ctgccgctta	2700
ccggatacct gtccgccttt ctcccttcgg gaagcgtggc gctttctcat agctcacgct	2760
gtaggtatct cagttcggtg taggtcgttc gctccaagct gggctgtgtg cacgaacccc	2820
ccgttcagtc cgaccgctgc gccttatccg gtaactatcg tcttgagtcc aacccggtta	2880
gacacgactt atcgccactg gcagcagcca ctggtaacag gattagcaga gcgaggtatg	2940
taggcggtgc tacagagttc ttgaagtggg ggcctaacta cggctacact agaagaacag	3000
tatttggtat ctgcgctctg ctgtagccag ttaccttcgg aaaaagagtt ggtagctctt	3060
gatccggcaa acaaaccacc gctggtagcg gtggtttttt tgtttgcaag cagcagatta	3120
cgcgagaaaa aaaaggatct caagaagatc ctttgatctt ttctacgggg tctgacgctc	3180
agtggaacga aaactcacgt taagggatth ttggtcagatc tagcaccagg cgtttaaggg	3240
caccaataac tgccttaaaa aaattacgcc ccgccctgcc actcatcgca gtactgttgt	3300
aattcattaa gcattctgcc gacatggaag ccatacaaaa cggcatgatg aacctgaatc	3360
gccagcggca tcagcacctt gtcgccttgc gtataatatt tgcccatagt gaaaacgggg	3420
gcgaagaagt tgtccatatt ggctacgttt aaatcaaaac tggtgaaact caccagggga	3480
ttggctgaga cgaaaaacat attctcaata aacccttttag ggaaataggc caggttttca	3540
ccgtaacacg ccacatcttg cgaatatatg tgtagaaact gccggaaatc gtcgtggtat	3600
tactccaga gcgatgaaaa cgtttcagtt tgctcatgga aaacggtgta acaagggtga	3660
acactatccc atatcaccag ctaccgtctt ttcatgcca tacggaactc cgggtgagca	3720
ttcatcaggc gggcaagaat gtgaataaag gccggataaa acttggtgctt atttttcttt	3780
acgggtcttta aaaaggccgt aatatccagc tgaacggtct gggttatagg acattgagca	3840

81408-4400 sequence listing.txt

```

actgactgaa atgcctcaaa atgttcttta cgatgccatt gggatatatc aacggtggta 3900
tatccagtga tttttttctc catttttagct tccttagctc ctgaaaatct cgataactca 3960
aaaaatacgc ccggtagtga tcttatttca ttatgggtgaa agttggaacc tcacccgacg 4020
tctaattgtga gtttagctcac tcattaggca ccccaggctt tacactttat gcttccggct 4080
cgtatgttgt gtggaattgt gagcggataa caatttcaca caggaaacag ctatgaccat 4140
gattacgaat t 4151

```

```

<210> 54
<211> 306
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> polynucleotide sequence of a VL domain

```

```

<220>
<221> misc_feature
<222> (253)..(255)
<223> NNN=ACT OR GTT

```

```

<400> 54
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat ttaccctga ccattagcag cctgcaacct 240
gaagactttg cgnntatta ttgccagacc ttggccagg gtacgaaagt tgaaattaaa 300
cgtacg 306

```

```

<210> 55
<211> 327
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> polynucleotide sequence of a VL domain

```

```

<400> 55
gatatccaga tgacccagag cccgtctagc ctgagcgcga gcgtgggtga tcgtgtgacc 60
attacctgca gagcgagcca gggcattagc agctatctgg cgtggtacca gcagaaacca 120
ggtaaagcac cgaaactatt aatttatgca gccagcagct tgcaaagcgg ggtcccgtcc 180
cgtttttagcg gctctggatc cggcactgat ttaccctga ccattagcag cctgcaacct 240
gaagactttg cggtttatta ttgctttcag tatggttcta ttctcctac ctttggccag 300
ggtacgaaag ttgaaattaa acgtacg 327

```

81408-4400 sequence listing.txt

<210> 56
<211> 309
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<220>
<221> misc_feature
<222> (256)..(258)
<223> NNN=ACT OR GTT

<400> 56
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatattat ggcgcgagca gccgtgcaac tgggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgnnnta ttattgccag acctttggcc aggggtacgaa agttgaaatt 300
aaacgtacg 309

<210> 57
<211> 330
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 57
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120
ccaggtcaag caccgcgtct attaatattat ggcgcgagca gccgtgcaac tgggggtcccg 180
gcgcgtttta gcggctctgg atccggcacg gattttaccc tgaccattag cagcctggaa 240
cctgaagact ttgcgactta ttattgccag cagatgtcta attatcctga tacctttggc 300
cagggtacga aagttgaaat taaacgtacg 330

<210> 58
<211> 330
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 58
gatatcgtgc tgacccagag cccggcgacc ctgagcctgt ctccgggcga acgtgcgacc 60
ctgagctgca gagcgagcca gagcgtgagc agcagctatc tggcgtggta ccagcagaaa 120

81408-4400 sequence listing.txt

ccaggtcaag caccgctct attaatttat ggcgcgagca gccgtgcaac tggggtcccg 180
 gcgcgttttta gcggctcttg atccggcacg gattttaccc tgaccattag cagcctggaa 240
 cctgaagact ttgcgactta ttattgccag cagactaata atgctcctgt tacctttggc 300
 cagggtacga aagttgaaat taaacgtacg 330

<210> 59
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 59
 gatatcgtga tgaccagag cccggatagc ctggcggtga gcctgggcca acgtgagacc 60
 attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg 120
 tggtagcagc agaaaccagg tcagccgccg aaactattaa tttattgggc atccaccgct 180
 gaaagcgggg tcccggatcg ttttagcggc tctggatccg gactgattt taccctgacc 240
 atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagacctt tggccagggt 300
 acgaaagttg aaattaaacg tacg 324

<210> 60
 <211> 345
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 60
 gatatcgtga tgaccagag cccggatagc ctggcggtga gcctgggcca acgtgagacc 60
 attaactgca gaagcagcca gagcgtgctg tatagcagca acaacaaaaa ctatctggcg 120
 tggtagcagc agaaaccagg tcagccgccg aaactattaa tttattgggc atccaccgct 180
 gaaagcgggg tcccggatcg ttttagcggc tctggatccg gactgattt taccctgacc 240
 atttcgtccc tgcaagctga agacgtggcg gtgtattatt gccagcagta tgattctatt 300
 ccttatacct ttggccaggg tacgaaagtt gaaattaaac gtacg 345

<210> 61
 <211> 315
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 61
 gatatcgcac tgaccagcc agcttcagtg agcggctcac caggtcagag cattaccatc 60

81408-4400 sequence listing.txt

tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag	120
catcccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg	180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg	240
caagcggaag acgaagcgga ttattattgc caggacgtgt ttggcggcgg cacgaagtta	300
accgttcttg gccag	315

<210> 62
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 62	
gatatcgac tgaccagcc agcttcagt agcggctcac caggtcagag cattaccatc	60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag	120
catcccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg	180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg	240
caagcggaag acgaagcgga ttattattgc cagagctatg acatgtataa ttatattgtg	300
tttggcggcg gcacgaagtt aaccgttctt ggccag	336

<210> 63
 <211> 330
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

<400> 63	
gatatcgac tgaccagcc agcttcagt agcggctcac caggtcagag cattaccatc	60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag	120
catcccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg	180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg	240
caagcggaag acgaagcgga ttattattgc cagtctcatc atttttatga ggtgtttggc	300
ggcggcacga agttaaccgt tcttggccag	330

<210> 64
 <211> 336
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VL domain

81408-4400 sequence listing.txt

<400> 64
gatatcgcac tgaccagcc agcttcagtg agcggctcac caggtcagag cattaccatc 60
tcgtgtacgg gtactagcag cgatgtgggc ggctataact atgtgagctg gtaccagcag 120
catccccgga aggcgccgaa actgatgatt tatgatgtga gcaaccgtcc ctcaggcgtg 180
agcaaccgtt ttagcggatc caaaagcggc aacaccgcga gcctgaccat tagcggcctg 240
caagcggaa acgaagcggg ttattattgc cagagctatg acaataattc tgatgttggtg 300
tttggcggcg gcacgaagtt aaccgttctt ggccag 336

<210> 65
<211> 306
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 65
gatatcgaac tgaccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgtt gggcgataaa tacgcgagct ggtaccagca gaaacccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccaggacgtg tttggcggcg gcacgaagtt aaccgttctt 300
ggccag 306

<210> 66
<211> 324
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VL domain

<400> 66
gatatcgaac tgaccagcc gccttcagtg agcgttgac caggtcagac cgcgcgtatc 60
tcgtgtagcg gcgatgcgtt gggcgataaa tacgcgagct ggtaccagca gaaacccggg 120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc 180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa 240
gacgaagcgg attattattg ccagagctat gactatttta agcttgtgtt tggcggcggc 300
acgaagttaa ccgttcttgg ccag 324

<210> 67
<211> 327
<212> DNA
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polynucleotide sequence of a VL domain

<400> 67

gatatcgaac tgacccagcc gccttcagtg agcgttgacac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactattctg ctgattatgt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 68

<211> 324

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 68

gatatcgaac tgacccagcc gccttcagtg agcgttgacac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gactttgatt ttgctgtgtt tggcggcggc	300
acgaagttaa ccgttcttgg ccag	324

<210> 69

<211> 327

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VL domain

<400> 69

gatatcgaac tgacccagcc gccttcagtg agcgttgacac caggtcagac cgcgcgatc	60
tcgtgtagcg gcgatgcgct gggcgataaa tacgcgagct ggtaccagca gaaacccggg	120
caggcgccag ttctggtgat ttatgatgat tctgaccgtc cctcaggcat cccggaacgc	180
tttagcggat ccaacagcgg caacaccgcg accctgacca ttagcggcac tcaggcggaa	240
gacgaagcgg attattattg ccagagctat gacggtcctg atctttgggt gtttggcggc	300
ggcacgaagt taaccgttct tggccag	327

<210> 70

81408-4400 sequence listing.txt

<211> 332
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 70
 nnngtgcaat tggttcagtc tggcgcgga gtgaaaaaac cgggcagcag cgtgaaagtg 60
 agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
 cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg 300
 ggccaaggca ccctggtgac ggtagctca gc 332

<210> 71
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 71
 caggtgcaat tggttcagtc tggcgcgga gtgaaaaaac cgggcagcag cgtgaaagtg 60
 agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
 cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgataat 300
 tggtttaagc ctttttctga tgtttggggc caaggcacc tggtgacggt tagctca 357

<210> 72
 <211> 357
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 72
 caggtgcaat tggttcagtc tggcgcgga gtgaaaaaac cgggcagcag cgtgaaagtg 60
 agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
 cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac 180

81408-4400 sequence listing.txt

```
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgttaat 300
cattggactt atacttttga ttattggggc caaggcaccc tggtgacggt tagctca 357
```

```
<210> 73
<211> 372
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VH domain
```

```
<400> 73
caggtgcaat tggttcagtc tggcgcggaa gtgaaaaaac cgggcagcag cgtgaaagtg 60
agctgcaaag cctccggagg cacttttagc agctatgcga ttagctgggt gcgccaagcc 120
cctgggcagg gtctcgagt gatgggcggc attattccga tttttggcac ggcgaactac 180
gcgcagaagt ttcagggccg ggtgaccatt accgcggatg aaagcaccag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtggtggt 300
ggttgggttt ctcatggtta ttattatctt tttgatcttt ggggccaagg caccctggtg 360
acggtttagct ca 372
```

```
<210> 74
<211> 332
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> polynucleotide sequence of a VH domain
```

```
<220>
<221> misc_feature
<222> (1)..(3)
<223> NNN=GAA OR CAG
```

```
<400> 74
nnngtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagtg 60
agctgcaaag cctccggata tacctttacc agctattata tgcaactgggt ccgccaagcc 120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac 180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgattgg 300
ggccaaggca ccctggtgac ggtagctca gc 332
```

```
<210> 75
<211> 378
<212> DNA
```

81408-4400 sequence listing.txt

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 75

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg    60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc    120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac    180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat    240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtaatatg    300
gcttatacta attatcagta tgtaatatg cctcattttg attattgggg ccaaggcacc    360
ctggtgacgg ttagctca                                     378
```

<210> 76

<211> 378

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 76

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg    60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc    120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac    180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat    240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttctatg    300
aattctacta tgtattgga tcttcgtcgt gttctttttg atcattgggg ccaaggcacc    360
ctggtgacgg ttagctca                                     378
```

<210> 77

<211> 354

<212> DNA

<213> Artificial Sequence

<220>

<223> polynucleotide sequence of a VH domain

<400> 77

```
caggtgcaat tggttcagag cggcgcgga gtgaaaaaac cgggcgcgag cgtgaaagtg    60
agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc    120
cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac    180
gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat    240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtgatttt    300
```

81408-4400 sequence listing.txt

cttggttatg agtttgatta ttggggccaa ggcaccctgg tgacggtttag ctca 354

<210> 78
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 78
 caggtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagtg 60
 agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc 120
 cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgttattat 300
 ggttcttctc ttatcatta tgtttttggg ggttttattg attattgggg ccaaggcacc 360
 ctggtgacgg ttagctca 378

<210> 79
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 79
 caggtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagtg 60
 agctgcaaag cctccggata tacctttacc agctattata tgcactgggt ccgccaagcc 120
 cctgggcagg gtctcgagt gatgggctgg attaaccga atagcggcgg cacgaactac 180
 gcgcagaagt ttcagggccg ggtgaccatg acccgtgata ccagcattag caccgcgtat 240
 atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtggttat 300
 tggtatgctt attttactta tattaattat gggtattttg ataattgggg ccaaggcacc 360
 ctggtgacgg ttagctca 378

<210> 80
 <211> 381
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 80
 caggtgcaat tggttcagag cggcgcggaa gtgaaaaaac cgggcgcgag cgtgaaagtg 60

81408-4400 sequence listing.txt

agctgcaaag cctccgata tacctttacc agctattata tgcactgggt ccgccaagcc 120
cctgggcagg gtctcgagt gatgggctgg attaaccgga atagcggcgg cacgaactac 180
gcgcagaagt ttcaggggccg ggtgacctg acccgtgata ccagcattag caccgcgtat 240
atggaactga gcagcctgcg tagcgaagat acggccgtgt attattgcgc gcgtacttgg 300
cagtattctt atttttatta tcttgatggg gggtattatt ttgatatttg gggccaaggg 360
accctggtga cggttagctc a 381

<210> 81
<211> 335
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<220>
<221> misc_feature
<222> (1)..(3)
<223> NNN=GAA OR CAG

<400> 81
nnngtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcagggtg 240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgatgat 300
tgggggccaag gcaccctggg gacgggttagc tcagc 335

<210> 82
<211> 390
<212> DNA
<213> Artificial Sequence

<220>
<223> polynucleotide sequence of a VH domain

<400> 82
caggtgcaat tgaaagaaag cggcccggcc ctggtgaaac cgacccaaac cctgaccctg 60
acctgtacct tttccggatt tagcctgtcc acgtctggcg ttggcgtggg ctggattcgc 120
cagccgcctg ggaaagccct cgagtggctg gctctgattg attgggatga tgataagtat 180
tatagcacca gcctgaaaac gcgtctgacc attagcaaag atacttcgaa aaatcagggtg 240
gtgctgacta tgaccaacat ggacccgggtg gatacggcca cctattattg cgcgcgttat 300
cattcttggg atgagatggg ttattatggg tctactgttg gttatatgtt tgattattgg 360
ggccaaggca ccctggtgac gggttagctca 390

81408-4400 sequence listing.txt

<210> 83
 <211> 341
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<220>
 <221> misc_feature
 <222> (1)..(3)
 <223> NNN=GAA OR CAG

<400> 83
 nnngtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cggtgagcgt gaaaagccgg attaccatca acccgatac ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgtgattggg gccaaaggcac cctggtgacg gttagctcag c 341

<210> 84
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> polynucleotide sequence of a VH domain

<400> 84
 caggtgcaat tgcaacagtc tgggtccgggc ctggtgaaac cgagccaaac cctgagcctg 60
 acctgtgcga tttccggaga tagcgtgagc agcaacagcg cggcgtggaa ctggattcgc 120
 cagtctcctg ggcgtggcct cgagtggctg ggccgtacct attatcgtag caaatggtat 180
 aacgattatg cggtgagcgt gaaaagccgg attaccatca acccgatac ttcgaaaaac 240
 cagtttagcc tgcaactgaa cagcgtgacc ccggaagata cggccgtgta ttattgcgcg 300
 cgttcttatt atcctgattt tgattattgg ggccaaggca ccctggtgac ggtagctca 360

<210> 85
 <211> 109
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 85

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln

81408-4400 sequence listing.txt

1 5 10 15
 Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
 20 25 30
 Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
 35 40 45
 Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60
 Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
 65 70 75 80
 Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Ser Ala Asp Tyr
 85 90 95
 Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
 100 105

<210> 86
 <211> 110
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> polypeptide sequence of a VL domain
 <400> 86

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
 1 5 10 15
 Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
 20 25 30
 Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
 35 40 45
 Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
 50 55 60
 Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
 65 70 75 80
 Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser His His Phe Tyr
 85 90 95
 Glu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
 100 105 110

81408-4400 sequence listing.txt

<210> 87
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 87

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
 35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Phe Asp Phe Ala Val
 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
 100 105

<210> 88
 <211> 115
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> polypeptide sequence of a VL domain

<400> 88

Asp Ile Val Met Thr Gln Ser Pro Asp Ser Leu Ala Val Ser Leu Gly
 1 5 10 15

Glu Arg Ala Thr Ile Asn Cys Arg Ser Ser Gln Ser Val Leu Tyr Ser
 20 25 30

Ser Asn Asn Lys Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln
 35 40 45

Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg Glu Ser Gly Val

50

55

60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
65 70 75 80

Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys Gln Gln
85 90 95

Tyr Asp Ser Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile
100 105 110

Lys Arg Thr
115

<210> 89

<211> 110

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 89

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Met Ser Asn Tyr Pro
85 90 95

Asp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
100 105 110

<210> 90

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

81408-4400 sequence listing.txt

<223> polypeptide sequence of a VL domain

<400> 90

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Asn Asn
85 90 95

Ser Asp Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 91

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 91

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser Tyr
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile
35 40 45

Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Phe Gln Tyr Gly Ser Ile Pro Pro
Page 41

85

90

95

Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105

<210> 92

<211> 110

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 92

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu
 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Asn Asn Ala Pro
 85 90 95

Val Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
 100 105 110

<210> 93

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VL domain

<400> 93

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
 1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
 20 25 30

81408-4400 sequence listing.txt

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Tyr Phe Lys Leu Val
85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 94
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VL domain
<400> 94

Asp Ile Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu
35 40 45

Met Ile Tyr Asp Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg Phe
50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu
65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Met Tyr
85 90 95

Asn Tyr Ile Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105 110

<210> 95
<211> 109
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VL domain

<400> 95

Asp Ile Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Ser Cys Ser Gly Asp Ala Leu Gly Asp Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser
50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Tyr Asp Gly Pro Asp Leu Trp
85 90 95

Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln
100 105

<210> 96

<211> 118

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 96

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

81408-4400 sequence listing.txt

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Phe Leu Gly Tyr Glu Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser
115

<210> 97
<211> 126
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 97

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Tyr Tyr Gly Ser Ser Leu Tyr His Tyr Val Phe Gly Gly Phe
100 105 110

Ile Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 98
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 98

81408-4400 sequence listing.txt

Gln Val Gln Leu Lys Glu Ser Gly Pro Ala Leu Val Lys Pro Thr Gln
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
20 25 30

Gly Val Gly Val Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala Leu Ile Asp Trp Asp Asp Asp Lys Tyr Tyr Ser Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

Cys Ala Arg Tyr His Ser Trp Tyr Glu Met Gly Tyr Tyr Gly Ser Thr
100 105 110

Val Gly Tyr Met Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
115 120 125

Ser Ser
130

<210> 99
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 99

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Asn Trp Phe Lys Pro Phe Ser Asp Val Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 100
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 100

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Asn His Trp Thr Tyr Thr Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 101
<211> 126
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Trp Tyr Ala Tyr Phe Thr Tyr Ile Asn Tyr Gly Tyr
100 105 110

Phe Asp Asn Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 102

<211> 124

<212> PRT

<213> Artificial sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 102

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe Ser Ser Tyr
20 25 30

Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Gly Ile Ile Pro Ile Phe Gly Thr Ala Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Gly Gly Trp Val Ser His Gly Tyr Tyr Tyr Leu Phe Asp
100 105 110

Leu Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120

<210> 103
<211> 127
<212> PRT
<213> Artificial Sequence

<220>
<223> polypeptide sequence of a VH domain

<400> 103

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Thr Trp Gln Tyr Ser Tyr Phe Tyr Tyr Leu Asp Gly Gly Tyr
100 105 110

Tyr Phe Asp Ile Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 104
<211> 126
<212> PRT
<213> Artificial Sequence

81408-4400 sequence listing.txt

<220>

<223> polypeptide sequence of a VH domain

<400> 104

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asn Met Ala Tyr Thr Asn Tyr Gln Tyr Val Asn Met Pro His
100 105 110

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 105

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 105

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

Gly Trp Ile Asn Pro Asn Ser Gly Gly Thr Asn Tyr Ala Gln Lys Phe
50 55 60

81408-4400 sequence listing.txt

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Ile Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Ser Met Asn Ser Thr Met Tyr Trp Tyr Leu Arg Arg Val Leu
100 105 110

Phe Asp His Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
115 120 125

<210> 106

<211> 120

<212> PRT

<213> Artificial Sequence

<220>

<223> polypeptide sequence of a VH domain

<400> 106

Gln Val Gln Leu Gln Gln Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Thr Leu Ser Leu Thr Cys Ala Ile Ser Gly Asp Ser Val Ser Ser Asn
20 25 30

Ser Ala Ala Trp Asn Trp Ile Arg Gln Ser Pro Gly Arg Gly Leu Glu
35 40 45

Trp Leu Gly Arg Thr Tyr Tyr Arg Ser Lys Trp Tyr Asn Asp Tyr Ala
50 55 60

Val Ser Val Lys Ser Arg Ile Thr Ile Asn Pro Asp Thr Ser Lys Asn
65 70 75 80

Gln Phe Ser Leu Gln Leu Asn Ser Val Thr Pro Glu Asp Thr Ala Val
85 90 95

Tyr Tyr Cys Ala Arg Ser Tyr Tyr Pro Asp Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser
115 120